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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,059	12/02/2003	Paul-Andre Lavoie	1061958	2938

59152 7590 03/10/2008

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
03/10/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmtl@OSLER.COM

Office Action Summary	Application No.	Applicant(s)	
	10/725,059	LAVOIE ET AL.	
	Examiner	Art Unit	
	Jeff Wollschlager	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed December 13, 2007 has been entered. Claims 1 and 5-13 are currently amended. Claims 1 and 4-15 are pending and under examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 5, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. (WO 01/82403) in view Barton et al. (US 6,503,432) and Kim et al. (US 6,403,266)

Citations to Winterberg et al. are provided from the equivalent US patent document, US Patent Application Publication 2004/0029008.

Regarding claims 1, 4, 5, 7, 10 and 11, Winterberg et al. teach a method of producing a rechargeable lithium-polymer battery comprising mixing a polymer with active material and a conductive additive (4); lithium salt (3) and a polymer into an input zone/ first mixing chamber (19); mixing a polymer with lithium salt into an input zone/second mixing chamber (18) to form an electrolyte slurry; extruding the electrode slurry and the electrolyte slurry intrinsically through flow channels and die openings/extruder nozzle (5) to produce a multilayered article (Figure 2) onto a moving current collector sheet (8 and 9) wherein the electrolyte sheet is extruded directly onto the electrode sheet (Abstract; Figure 1; paragraph [0014-0034; 0043; 0047-0048]).

Winterberg et al. do not expressly teach forming the multi-layered structure having an electrode and electrolyte on both sides of the current collector as claimed. However, Barton et al. teach a method of producing extruded multi-layered lithium ion batteries, including extruding on both sides of a current collector (Abstract; Figure 1; col. 6, lines 28-52; col. 12, lines 16-col. 13, lines 52) and Kim et al. teach applying additional layers to form a multi-layered lithium battery structure having electrode and electrolyte layers on both sides of a current collector (Figure 3).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method disclosed by Winterberg et al. and to have produced an extruded multi-layered lithium battery by extruding on both sides of the current collector as suggested by Barton et al. and to have produced a structure such as that set forth by Kim et al. for the purpose of increasing the capacity of the battery as is routinely practiced in the art.

Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. WO 01/82403), in view Barton et al. (US 6,503,432) and Kim et al. (US

6,403,266) as applied to claims 1, 4, 5, 7, 10 and 11 above, and further in view of Fukumura et al. (US 5,674,556).

As to claim 6, 8 and 9, the combination teaches the method as set forth above. Winterberg et al. do not teach the die comprises a central channel adapted to guide the current collector between the die openings. However, Fukumura et al. teach that it is known in the art to guide the current collector between the die openings (Figure 7A and 7B).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method disclosed by Winterberg et al. and to have extruded the current collector between the die openings as suggested by Fukumura et al. since Fukumura et al. suggest that such a method is an equivalent alternative method of forming a multi-layered extruded battery structure.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. WO 01/82403), in view Barton et al. (US 6,503,432) and Kim et al. (US 6,403,266) as applied to claims 1, 4, 5, 7, 10 and 11 above, in view of applicant's admitted prior art (see US 2004/0159964 for text of the instant disclosure).

As to claims 12-15, the combination teaches the method as set forth above. Winterberg et al. do not teach controlling the layer thicknesses using various measuring devices (e.g. optical, ultrasonic, etc.). However, applicant's admission teaches that controlling the layer thicknesses using various measuring devices is known to those skilled in the art to ensure strict tolerances (paragraph [0028]).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have used any of the various measuring devices as taught

by applicant's admission in the process of Winterberg et al. for the purposes of achieving the desired layer thicknesses within a specific tolerance.

Response to Arguments

Applicant's arguments filed December 13, 2007 have been fully considered against the Winterberg reference alone, but are moot in view of the new grounds of rejection necessitated by the amendment to claim 1.

Applicant's arguments against Barton and Kim have been fully considered, but they are not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The examiner submits that Winterberg teaches the basic claimed process while Barton teaches extruding multi-layered battery structures wherein it is known to extrude on both sides of the current collector (col. 13, lines 17-20) and Kim discloses a batter structure having electrode and electrolyte layers on either side of the current collector (Figure 3). Accordingly, as set forth in the rejection above, the examiner maintains that the combination reasonably teaches and suggests the limitations set forth in currently amended claim 1.

Regarding claim 6, applicant argues that Fukumara does not describe a central channel as claimed. This argument is not persuasive. The examiner submits that the spacing set forth by Fukumara is reasonably understood, under a broad reasonable interpretation, to be a central channel as it is currently presented in the claims that is "adapted to guide the current collector between….such that…extruded on said moving current collector". Furthermore, the

examiner submits that such a central channel arrangement is routine and conventional in the co-extrusion art when co-extruding on both sides of a substrate.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 6,676,865 and US 3,544,669.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./
Examiner, Art Unit 1791

March 13, 2008

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791